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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF APPEALS AND INTERFERENCES

In the application of	:	H C Gan et al
Serial No.	:	09/286,087
Filed	:	April 2, 1999
For	:	HLR Data Migration
Examiner	:	P Sobutka
Art Unit	:	2683

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to "Director of Patents and Trademarks, Washington, D.C 20231," on March 18, 2003.
Name of person signing Jennifer J. Ramirez
Signature

REPLY BRIEF

Honorable Director of
Patents and Trademarks
Washington, D.C. 20231

Dear Sir,

This reply is responsive to the Examiner's Answer dated January 29, 2003, to the Appeal currently pending before the Board of Patent Appeals and Interferences.

The applicant notes the Examiner's agreement that the summary of invention contained in the Appeal Brief is correct. The applicant also notes that the Examiner has reduced his grounds of rejection of the appealed claims to essentially the disclosure of Ericsson et al (US 5,956,637). The Examiner maintains the view that Ericsson teaches migrating data corresponding to subscriber identities between two or more HLRs and in this regard draws attention to column 3, lines 10 to 37 of Ericsson. The Examiner also clarifies that while Ericsson does indeed teach the step of permanently transferring data from one HLR to another HLR, it is not this

permanent transfer of data that is the basis for his continued rejection of the currently pending claims. The basis in Ericsson for the Examiner's position is described in that part of Section (11), "Response to Argument" of the Examiner's Answer which spans pages 4 and 5 of said Examiner's Answer, namely that "The HLR provides data storage for the subscriber's "home" area. When the subscriber roams to, or "visits", an area served by another HLR node, the subscriber data is transferred to the other HLR into a database referred to as a VLR or visitor location register. In order to ensure that calls and services are delivered to the area where the subscriber is active, the system treats the VLR data as active while the data in the HLR is in effect in standby. The examiner maintains that this HLR/VLR data transfer, as shown in Ericsson, is indistinguishable from appellant's claims. As to the fact that the appellant's claims refer to two HLR's rather than Ericsson's HLR/VLR, it should be noted that the HLR is considered to include the VLR.".

Careful consideration of what Ericsson et al actually teaches will show that this position cannot be sustained. Ericsson deals with a problem arising in a universal mobile telephone system (UMTS) in that, because of the large number of UMTS subscribers, a translation between a subscriber number and an associated HLR database is not available in a universal fixed table and not available as general information in all mobile switching centers (MSCs) of the UMTS. When a call is made to a subscriber it is necessary to locate a node somewhere in the network that can translate the called subscriber's number into location information. (Column 1, lines 48 to 56 of Ericsson).

Tracking the location of subscribers in a UMTS involves the task of location updating. In location updating, databases containing information on subscribers' locations within the system are maintained so that a subscriber may be located when necessary, as, for example, when a call directed towards the subscriber is received in the system. Searching is a resource intensive task in which the system searches for the location of a called subscriber in one or more of the databases distributed throughout the system that contain location information on the called subscriber. (Column 2, lines 12 to 21 of Ericsson).

The objective of Ericsson et al, therefore, is to maintain databases in a UMTS that allows the transfer of personalized subscriber data from one database to another as a subscriber moves throughout the system (Ericsson et al, column 2, lines 22 to 25). The Examiner is therefore correct in suggesting that Ericsson et al contemplates the transfer of subscriber data between databases. However, in considering the remainder of the submission herein, it is important to note that this data is defined as personalized subscriber data which is of a particular type that should be located in a database (VLR) of the system area in which the subscriber is currently located, rather than remain in a home database (HLR) in the subscriber's original home system area (Ericsson et al, column 2, lines 26 to 30).

In the Examiner's Answer, the Examiner has again drawn attention to Ericsson et al, column 3, lines 10 to 37 as supporting his position that Ericsson teaches the migration of data corresponding to subscriber identities between two or more HLRs. The Examiner goes on to contend that column 4, lines 28 to 47 of Ericsson teaches diverting transactions from one HLR to the other HLR where the subscriber is active and finally that the data in the first HLR would be on standby, while the second is active.

The present invention, as the Examiner has conceded by his recognition that the summary of the invention contained in the Appeal Brief is correct, relates to a load sharing arrangement between a first HLR and a second HLR in which each HLR has the totality of subscriber data distributed between them such that each HLR supports some subscriber data as active data and some subscriber data as standby data. Importantly, in each HLR, that data which has a standby status corresponds to active subscriber data of the other node and it is at least in this important respect that Ericsson differs from the present invention since it does not contemplate mirroring data between the HLRs of the system as the Examiner contends. Referring firstly to column 3, lines 10 to 37 of Ericsson, it can be seen that when a calling subscriber calls a called subscriber, the called subscriber's MSC will search for and find the called subscriber's visitor location register (VLR) database and ask first for a roaming

number, and second, for the HLR database identity associated with the called subscriber. The calling subscriber's MSC will then use this information to route the call and connect the calling subscriber to the called subscriber, but it will also store the called subscriber's HLR identity, together with the called subscriber's identity, in its personal profile. By storing HLR identities of called subscribers in the personal profile of the caller, information on the location of previously called subscribers is made quickly accessible.

Thus, it can be seen that data is indeed transferred from one database to another, but there are two flaws in the Examiner's position with regard to his continued rejection of the appealed claims. Firstly, there is nothing in the teaching of Ericsson et al that requires the mirroring of subscriber data in a shared arrangement between two HLRs where data having a status of standby in one HLR corresponds to that which has a status of active in the other and vice versa. In the case of Ericsson, subscriber identity data is transferred to the personalized search list of a calling subscriber and this data is used as a means of reducing the effort to locate a previously called subscriber should the calling subscriber make a further call to such subscriber. Thus, in the case of the calling subscriber's personalized search list data, the data transferred to it comprising the identity of the called subscriber must be active. It also follows that this part of the called subscriber's data which remains stored in its HLR must also remain active, since it may be required for transfer (copying) to the personalized search list databases of other calling subscribers. It is therefore apparent that this transferred data is not placed in a standby mode in its HLR. It is also apparent that, even if it were, this would not result in the mirroring of subscriber data in active and standby modes between two HLR's as in the current invention.

The applicants' view presented in the proceeding paragraph is supported by column 4, lines 28 to 47 of Ericsson to which the Examiner has also drawn attention. A proper consideration of this part of the teaching of Ericsson et al reveals that the personalized database is implemented by determining the location of subscriber data stored within the system according to subscriber behavior. As a subscriber roams

within the system, the total subscriber data is distributed between the subscriber database that is permanently provided in the HLR of the subscriber's home system and the temporary subscriber database provided in the VLR of the visited system. The actual data distribution between HLR and VLR may depend on the usage of particular subsets of the data (column 4, lines 28 to 36). It can therefore be concluded from this passage in Ericsson et al that a subscriber's data comprises that part which is permanent in its home base HLR and that which can be temporarily distributed throughout the system primarily as a means of identifying the location of the subscriber. It cannot be concluded from this that this achieves the arrangement of the present invention in which HLRs mirror the data stored in each other in an arrangement where active subscriber data in one HLR is mirrored by standby data in the other and vice versa.

It is also apparent that a further difference between the teaching of Ericsson and the present invention as defined by at least claim 1 is that there is an actual transfer of data in the case of Ericsson et al, whereas in the present invention the so-called "transfer of data" is achieved by coordinating the change of status of a subscriber's data from active to standby in, for example, a first HLR and from standby to active in a second HLR. There is nothing in the teaching of Ericsson et al which would suggest such a method of transfer of subscriber data.

Further support for the applicant's position can be found throughout the teaching of Ericsson and, in particular, column 6, lines 29 to 47 which again explains how a subscriber's data is distributed between its home base HLR and a visited location VLR and that such data comprises that which is permanently located in its home base HLR and that which is made temporarily available to the visited location VLR. Once again, this confirms that there is no mirroring of subscriber data in a shared load arrangement between HLRs as taught by the present invention.

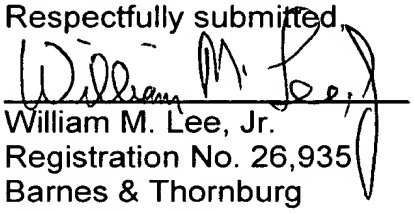
It is well-settled that to establish and maintain a rejection that the claims of an application are anticipated by the teaching of a prior art reference, it is necessary to identify in the prior art reference each feature of the invention as defined by the

independent claims of said application. The Examiner has failed to meet this requirement since he has not identified where each and every feature of the independent claims of the present application finds correspondence in the teaching of Ericsson, but has instead relied on an assertion that Ericsson teaches the transfer of some subscriber data between HLRs and VLRs and then has extrapolated this to suggest that the present invention is not new.

For the reasons suggested throughout the prosecution of this application, in the Appeal Brief and now contained in this submission, the Board of Appeals and Interferences is respectfully requested to overturn the Examiner's continued rejection of the appealed claims.

March 18, 2003

Respectfully submitted,



William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 368-6620
(312) 368-0034 (fax)